# ECODENS

EN

Gas fired condensing boiler

# DTG 1300-24 Eco / V130

## User Guide

300010111-001-B

De Dietrich

# Contents


1 Introduction . . . . . 3
1.1 Symbols and abbreviations . . . . . 3
1.2 General . . . . . 3
1.2.1 Manufacturer's liability . . . . . 3
1.2.2 Installer's liability . . . . . 3
1.2.3 User's liability . . . . . 3
1.3 Certifications . . . . . 4
2 Safety instructions and recommendations . . . . . 5
2.1 Safety instructions . . . . . 5
2.2 Recommendations . . . . . 5
3 Description . . . . . 6
3.1 General description . . . . . 6
3.2 Control panel . . . . . 6
4 Operating instructions . . . . . 7
4.1 Starting and stopping the boiler . . . . . 7
4.1.1 Start the boiler . . . . . 7
4.1.2 Stopping the boiler . . . . . 7
4.2 Changing the settings . . . . . 7
4.2.1 Selecting the operating mode . . . . . 7
4.2.2 Changing the heating temperature . . . . . 7
4.2.3 Changing the domestic hot water temperature . . . . . 7
4.3 Prolonged absence . . . . . 8
4.3.1 Switching off the appliance . . . . . 8
4.3.2 Antifreeze protection . . . . . 8
5 Checking and maintenance . . . . . 9
5.1 General instructions . . . . . 9
5.2 Periodic checks . . . . . 9
5.3 Topping up the boiler with water (If the option is connected) . . . . . 9
5.4 Bleeding the heating system . . . . . 10
5.5 Draining the installation . . . . . 11
6 Troubleshooting . . . . . 12
6.1 Breakdown codes . . . . . 12
6.1.1 Safety alarms . . . . . 12
6.1.2 Sensor alarms . . . . . 12
6.1.3 Before contacting the installer . . . . . 12
6.2 Incidents and solutions . . . . . 13
6.2.1 The burner is not working . . . . . 13
6.2.2 The burner is operating but the radiators are cold . . . . . 14
6.2.3 The domestic hot water does not appear hot enough . . . . . 14
6.2.4 Hot water takes a very long time to reach certain draw-off points and not others . . . . . 14
7 Caractéristiques techniques . . . . . 15
8 Energy savings . . . . . 16
8.1 Energy-saving advice . . . . . 16
8.2 Room thermostat and settings . . . . . 16

# 1 Introduction

## 1.1 Symbols and abbreviations

In these instructions, various markings and pictograms are used to draw your attention to particular information. In so doing, **De Dietrich Thermique S.A.S** wishes to safeguard the user's safety, obviate hazards and guarantee correct operation of the appliance.

**DHW**: Domestic hot water

**Caution danger**
**Risk of injury and damage to equipment. Attention must be paid to the warnings on safety of persons and equipment.**

Important information
Information must be kept in mind to maintain comfort.

Reference
Refer to another manual or other pages in this instruction manual.

## 1.2 General

### 1.2.1 Manufacturer's liability

Our products are manufactured in compliance with the essential requirements of the various Directives applicable. They are therefore delivered with CE marking and all relevant documentation.

In the interest of customers, we are continuously endeavouring to make improvements in product quality. All the specifications stated in this document are therefore subject to change without notice.

Our liability as the manufacturer may not be invoked in the following cases:

- Incorrect use of the appliance.
- Faulty or insufficient maintenance of the appliance.
- Incorrect installation of the appliance.

### 1.2.2 Installer's liability

The installer is responsible for the installation and inital start up of the appliance.

The installer must respect the following instructions:

- Read and follow the instructions given in the manuals provided with the appliance.
- Carry out installation in compliance with the prevailing legislation and standards.
- Perform the initial start up and carry out any checks necessary.
- Explain the installation to the user.
- Warn the user of the obligation to check the appliance and maintain it in good working order.
- Give all the instruction manuals to the user.

### 1.2.3 User's liability

To guarantee optimum operation of the appliance, the user must respect the following instructions:

- Read and abide by the instructions given in the user manual.
- Call on qualified professionals to carry out installation and initial start up.
- Get your fitter to explain your installation to you.
- Have the required checks and services done.
- Keep the instruction manuals in good condition close to the appliance.

This appliance is not intended to be used by persons (including children) whose physcial, sensory or mental capacity is impaired or persons with no experience or knowledge, unless they have the benefit, through the intermediary of a person responsible for their safety, of supervision or prior instructions regarding use of the appliance. Care should be taken to ensure that children do not play with the appliance.

## 1.3 Certifications

| | |
|---|---|
| CE identification no | CE-0085BQ0052 |
| Type of connection | Chimney: $B_{23P}$ - $B_{33}$ |
| | Forced flue: $C_{13(x)}$ - $C_{33(x)}$ - $C_{43(x)}$ - $C_{53}$ - $C_{63(x)}$ * - $C_{83(x)}$ - $C_{93(x)}$ |
| Ignition | Automatic |

* Except Belgium and France

(x) For Germany only

# 2 Safety instructions and recommendations

## 2.1 Safety instructions

**DANGER**

**If you smell gas:**

1. Do not use a bare flame, do not smoke, do not actuate electrical contacts or switches ( doorbell, light, motor, lift, etc..).
2. Cut the gas supply.
3. Open the windows.
4. Evacuate the premises.
5. Call your fitter.

Depending on the settings of the appliance:

- The temperature of the flue gas conduits may exceed 60°C.
- The temperature of the radiators may reach 85°C.
- The temperature of the domestic hot water may reach 65°C.

**DANGER**

**If you smell flue gases:**

1. Switch the appliance off.
2. Open the windows.
3. Evacuate the premises.
4. Call your fitter.

**Do not neglect to service the appliance:**
**For completely safe and optimum operation, you must have your boiler regularly serviced by an approved installer.**

## 2.2 Recommendations

The installation and the first start-up must be performed by a qualified professional.

**Only qualified professionals are authorised to work on the appliance and the instalation.**

- Regularly check the water pressure in the installation (minimum pressure 0.8 bar, recommended pressure between 1.5 and 2 bar).
- Keep the appliance accessible at all times.
- Never remove or cover labels and rating plates affixed to the appliance. Labels and rating plates must be legible throughout the entire lifetime of the appliance.

### ■ Aeration

The air inlet into the premises must in no event be obstructed, even partially.

### ■ Maintenance

The servicing and cleaning of the boiler and the sweeping of the flue gas pipe and the bleed pot must be done at least once a year by a qualified professional.

We recommend that you take out a maintenance contract.

### ■ Precautions against frost

The boiler is fitted with an antifreeze system. In the event of total shutdown of the heating in winter which may lead to the danger of freezing (switching off of radiators and current), we recommend using a correctly dosed anti-freeze product to stop the heating water freezing. Failing this, drain the installation completely (in all cases, consult your fitter).

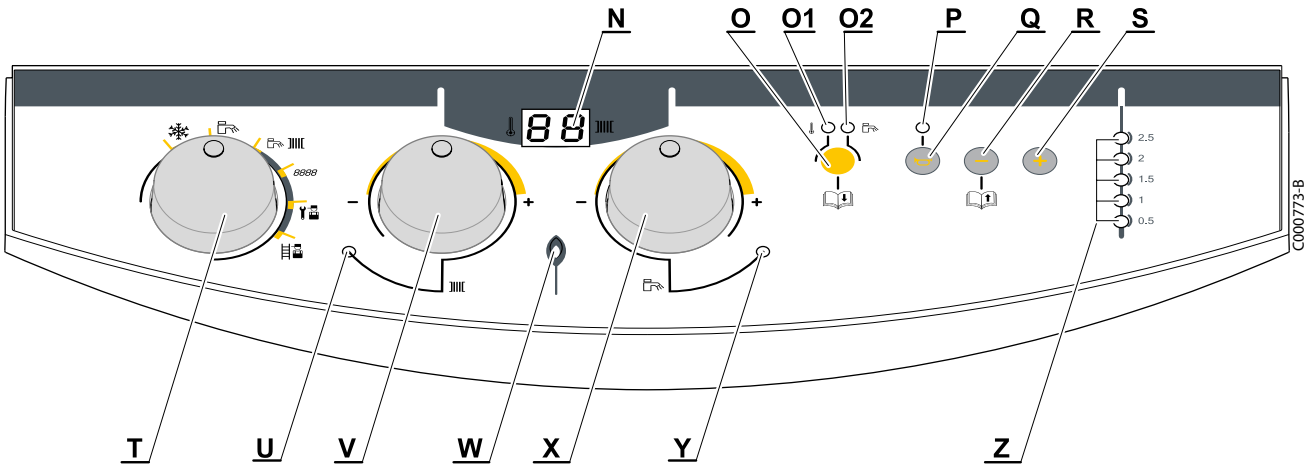
# 3 Description

## 3.1 General description

ECODENS boilers are floor-standing gas-fired condensing boilers. They are combined with a 130 litre tank to handle domestic hot water production and central heating using radiators or underfloor heating.

The boilers can operate on natural gas or on butane/propane. They are factory set for natural gas H.

## 3.2 Control panel



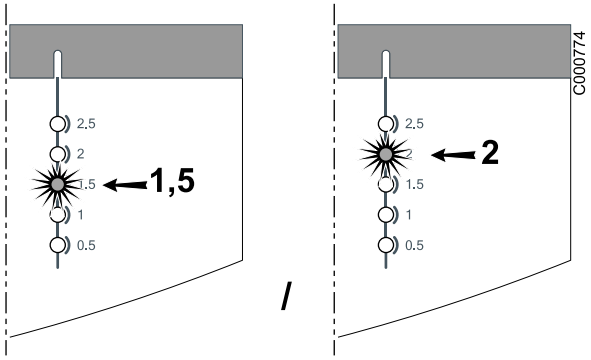

| | | |
|---|---|---|
| **N** | **Temperature display** | The display shows the temperature of the water in the domestic hot water heating outlet when there is a request for domestic hot water. |
| **O** | **Domestic hot water temperature maintenance override button** | **With Easymatic remote control:**<br>Pressing the button for 1 second makes it possible to override domestic hot water tank loading outside the time period programmed in the control unit up to midnight (indicator light O2 flash).<br>- Light O1 lit : The burner is ignited to reheat the domestic hot water tank.<br>- Light O2 off : No override or programme running.<br>- Light O2 lit : Comfort programme activated. |
| **P** | **Safety shutdown light** | **Indicates an error in the boiler.** |
| **Q** | **Reset button** | To restart the boiler after safety shutdown. |
| **R** | **Button -** | **Used only in measurement 8888, installer and sweep mode.** |
| **S** | **Button +** | Used only in sweep mode. |
| **T** | **6-position switch** | - : Stop / Anti-freeze / Bleed.<br>- : Domestic hot water (Summer).<br>- : Heating and domestic hot water (Winter).<br>- 8888 : Measurement mode (Key to access the parameters reserved for the installer).<br>- : Fitter mode (Key to access the parameters reserved for the installer).<br>- : Sweeping mode (Key to access the parameters reserved for the installer). |
| **U** | **"Heating" on light** | The light is on when the heating/domestic hot water reversal valve is in the heating position and the circulator pump is operating. |
| **V** | **Heating temperature setting** | Setting range: 30 °C to 90 °C (Hard spot at 68°C). |
| **W** | **Flame presence light** | The light is on when the burner is operating. |
| **X** | **Setting the domestic water temperature** | Setting range: 40 °C to 60 °C (Hard spot at 55°C). |
| **Y** | **"Domestic hot water" on light** | The light is on when the heating/domestic hot water reversal valve is in the domestic hot water position and the circulator pump is operating. |
| **Z** | **Pressure indicator** | Indicates the pressure in the heating circuit from 0.5 to 2.5 bar. |

# 4 Operating instructions

## 4.1 Starting and stopping the boiler

### 4.1.1 Start the boiler

1. Check the water pressure in the installation. If necessary, top up the boiler with water.
   The water pressure in the boiler must be between 1.5 and 2 bar.
2. Open the gas valve.
3. Set the 6-position switch **T** to (summer mode) or (winter mode).




### 4.1.2 Stopping the boiler

- Set the 6-position switch **T** to (stop / antifreeze / vent). The boiler goes into standby mode. The display shows " .. ".

In this operating mode, only the boiler is protected against frost.

## 4.2 Changing the settings

### 4.2.1 Selecting the operating mode

- Set the 6-position switch **T** to the desired operating mode.
  - : Stop / Anti-freeze / Bleed.
  - : Domestic hot water (Summer).
  - : Heating and domestic hot water (Winter).

### 4.2.2 Changing the heating temperature

- Set the temperature of the heating water using button **V**.
  The temperature set in shown on the display.

If using an outside temperature sensor, the heating flow temperature is adjusted automatically.

### 4.2.3 Changing the domestic hot water temperature

- Set the domestic hot water temperature using button **X**.
  The temperature set in shown on the display.

## 4.3 Prolonged absence

### 4.3.1 Switching off the appliance

If the central heating system is not used for a long period, we recommend switching the boiler off.

1. Switch the boiler off.
2. Cut the power supply to the boiler.
3. Close the gas valve.

### 4.3.2 Antifreeze protection

**The boiler must be installed in a frost-free environment.**

We recommend setting the boiler thermostat to a value off 10°C if using a classic installation.

If the temperature of the central heating water in the boiler falls too much, the integrated protection device switches itself on:

- If the water temperature is lower than 7°C, the circulating pump is activated.
- If the water temperature is lower than 3°C, the boiler is activated.
- When the water temperature is above 10 °C, the boiler is switched off and the circulation pump runs for another 15 minutes.

# 5 Checking and maintenance

## 5.1 General instructions

**An annual inspection is compulsory.**

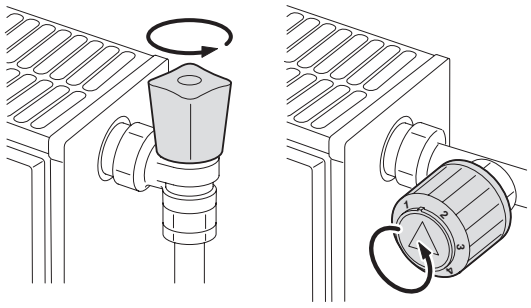
**We recommend that you take out a maintenance contract.**

**Maintenance operations must be done by a qualified professional.**

**Only original spare parts must be used.**

## 5.2 Periodic checks

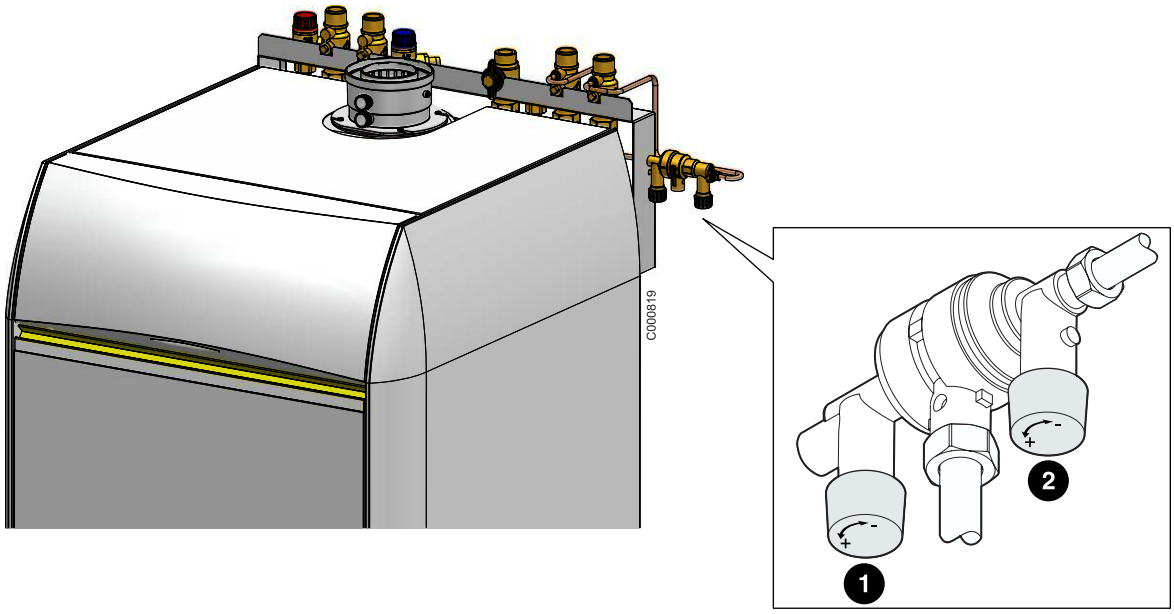
- Regularly check the water pressure in the installation (minimum pressure 0.8 bar, recommended pressure between 1.5 and 2 bar).
  If the water pressure is too low, add more water to the installation (See Topping up the boiler with water).
- Carry out a visual check for the presence of any water leaks.
- Open and close the radiator valves several times a year (this prevents the valves from seizing up).




- Clean the outside of the boiler using a damp cloth and a light detergent.

**Only a qualified professional is authorised to clean the inside of the boiler.**

## 5.3 Topping up the boiler with water (If the option is connected)



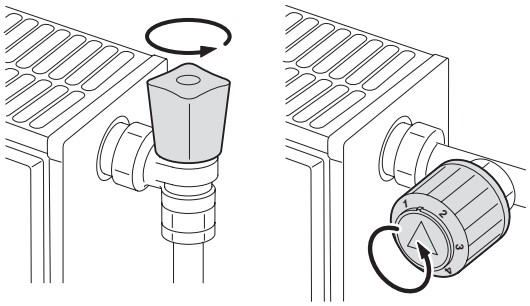

1. Open valves ❶ and ❷ (by turning towards the **+**).
   The water pressure in the boiler must be between 1 and 2 bar
2. Close the 2 valves (by turning towards the **-**).

## 5.4 Bleeding the heating system

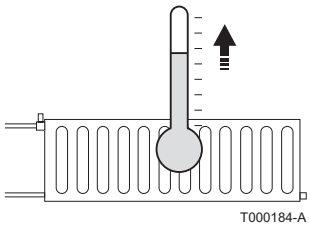
It is essential that you vent any air in the appliance, the ducts or the valves to prevent the noise annoyance likely to be produced during heating or water draw-off.

To do this, proceed as follows:

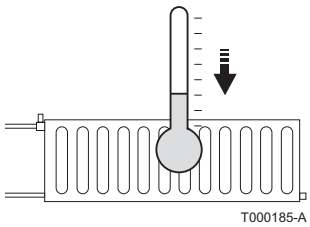
1. Open the valves on all radiators connected to the heating system.



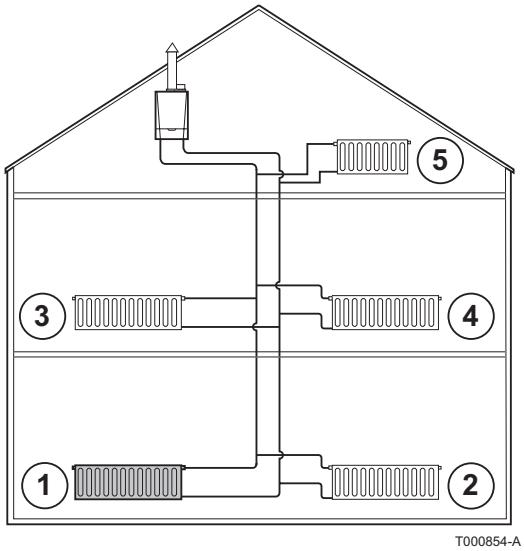

2. Set the heating set point to as high a temperature as possible.
3. Wait until the radiators are hot.




4. Switch the boiler off.
5. Wait around 10 minutes until the radiators are cold.




6. Bleed the radiators.
   Start with the lower floors.




7. Open the bleed connection using the bleed key, keeping a rag pressed against the connection.
8. Wait until water comes out of the bleed valve and then close the bleed connection.

**The water may still be hot.**

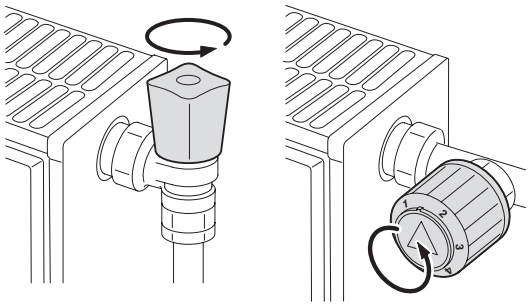
9. Switch on the boiler.
10. Check the pressure of the installation.
    If the water pressure is too low, add more water to the installation (See Topping up the boiler with water).
11. Set the heating set point.

## 5.5 Draining the installation

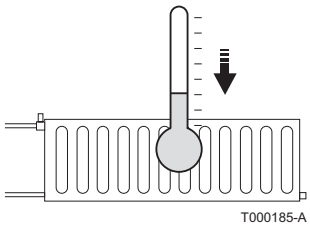
It may become necessary to empty the water from the heating system when the radiators have to be replaced, should there be a major water leak or a risk of frost.

To do this, proceed as follows:

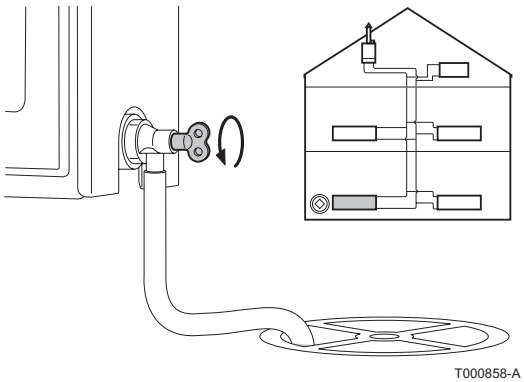
1. Open the valves on all radiators connected to the heating system.




2. Cut the power supply to the boiler.
3. Wait around 10 minutes until the radiators are cold.




4. Connect an evacuation hose to the plug located at the lowest level.
5. Place the end of the hose in a discharge sump or in a place where the water discharged from the valve can not do any damage.




6. Open the filling/draw-off valve on the heating system. Bleed the heating installation.

**The water may still be hot.**

7. When no more water comes out of the drainage plug, close the drainage valve.

# 6 Troubleshooting

In the event of a fault, the display indicates an alarm message by alternately showing **AL** and a code from which the type of fault can be determined.

## 6.1 Breakdown codes

### 6.1.1 Safety alarms

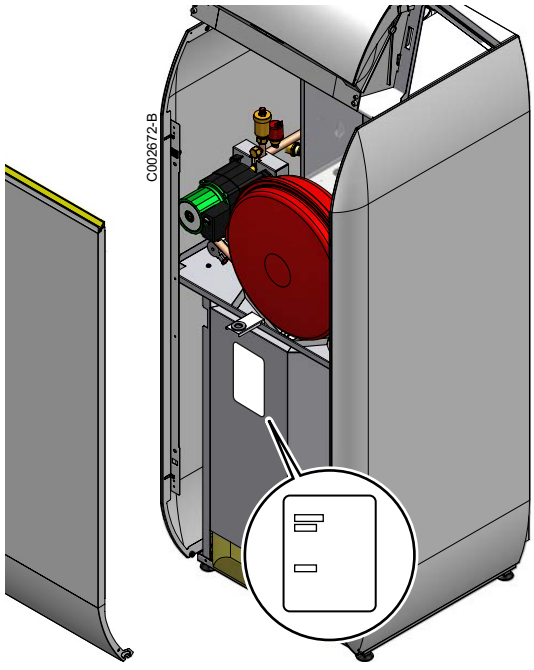
| Alarm code | Meaning |
|---|---|
| **cA** | Igniter fault |
| **cI** | Ionization error |
| **tS** | Overheating alarm |
| **PA** | No water |
| **cd** | Communication error with the safety control box (card side) |
| **c8** | Internal error safety control box |
| **A1** | Communication error with the safety control box (box side) |
| **TH** | Communication with the communicating remote interrupted |

### 6.1.2 Sensor alarms

| Alarm code | Meaning |
|---|---|
| **40** | Fault external sensor |
| **41** | No outside sensor on start-up if outlet sensor B present |
| **42** | Fault outlet sensor B |
| **50 or 51** | Fault temperature sensor heating outlet |
| **54 or 44** | Domestic hot water outlet sensor fault |
| **58 or 59** | Fault electronic manometer |

### 6.1.3 Before contacting the installer

- Try to restart the boiler once by pressing the key **Q** on the control panel.
- If this fails after a second try to restart,inform the professional responsible for maintaining the boiler.
- Note the following information on the appliance's rating plate:
  - Boiler type
  - Date of manufacture
  - Serial no. of the appliance
  - Type of gas used.



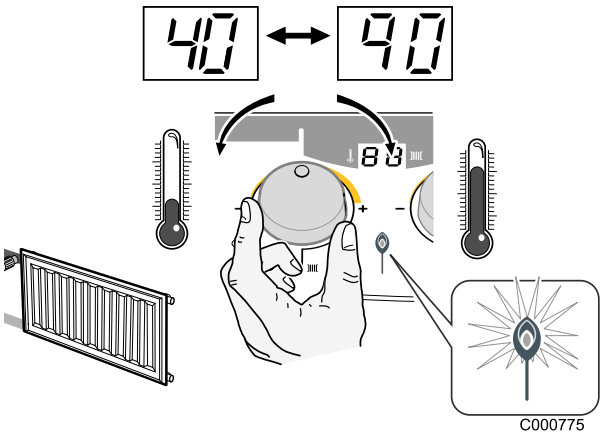
## 6.2 Incidents and solutions

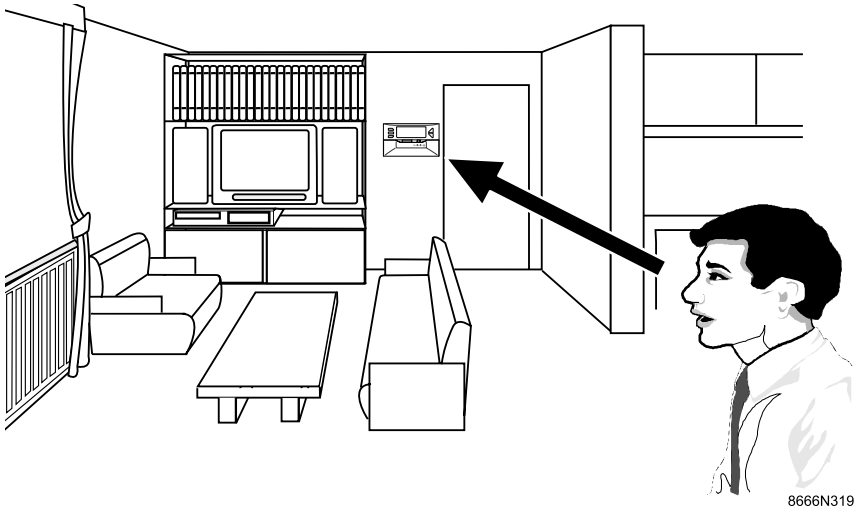
**Checks to make before calling your fitter**

### 6.2.1 The burner is not working

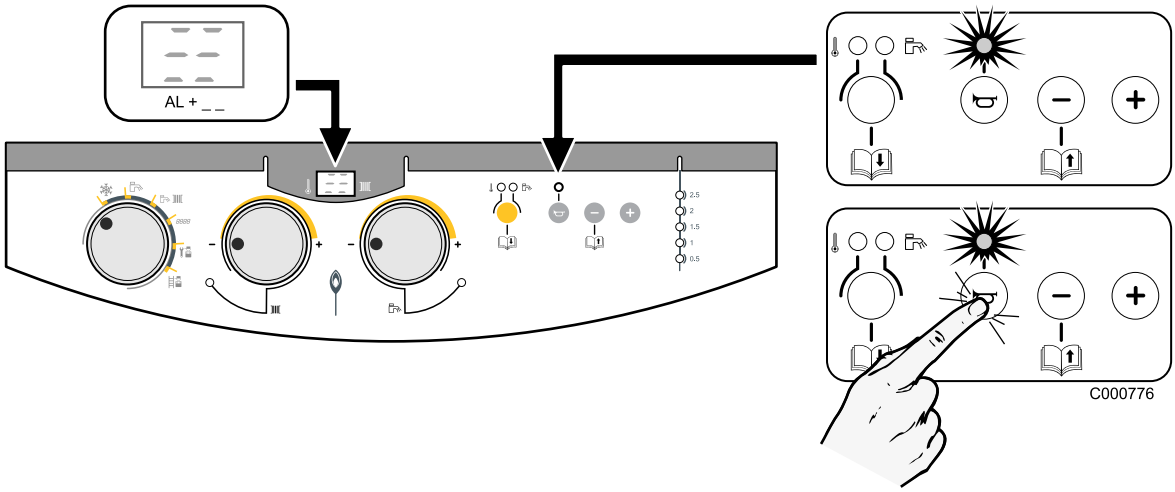
#### ■ It is cold.

- Check the boiler thermostat settings.
- If using a room temperature thermostat or a remote control (Easymatic or Easyradio), check that it is set according to the instructions.




#### ■ It is cold. There is no domestic hot water

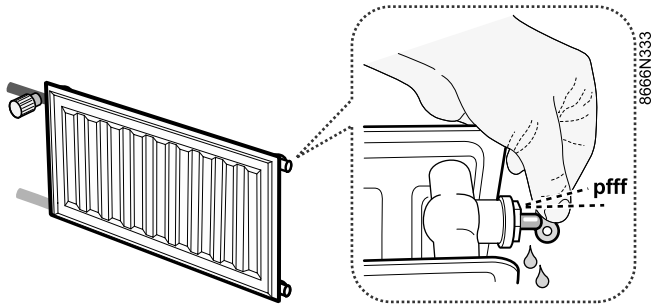



- Note the code displayed **AL + _ _**.
- Press button **Q** until the red light goes out.
- Release the button. The boiler restarts.
- If there is a problem, contact your fitter, specifying the alarm code.

## 6.2.2 The burner is operating but the radiators are cold

### ■ Air and water noise in the radiators

- Bleed the radiators.
- Top up the heating circuit with water.
- If it is often necessary to top up the installation with water, contact your fitter.
- If the problem persists, consult your fitter.




### ■ The burner is operating but the radiators are cold

- Check that the boiler heating pump is operating correctly.
- If the problem persists, consult your fitter.

## 6.2.3 The domestic hot water does not appear hot enough

▸ Flow of water from the tap too high. The higher the flow, the lower the temperature.

- Reduce the flow from the hot water tap.
- If several draw-off points are open at the same time, close one or other of the points.

## 6.2.4 Hot water takes a very long time to reach certain draw-off points and not others

This is due to the length of the hot water pipes between the draw-off points and the boiler. The greater the length, the longer the time necessary for the hot water to replace the colder water in the pipes.

# 7 Technical characteristics

| DTG 1300-24 Eco / V130 | | | | |
|---|---|---|---|---|
| **Boiler** | Nominal useful output 50/30 (Heating mode) | | kW | 23.7 |
| | Nominal useful output (DHW mode) | | kW | 23.7 |
| | Nominal input power (heating and DHW modes) | | kW | 22.8 |
| | Minimum useful output 50/30 (Heating mode) | | kW | 6.0 |
| | Minimum input power (heating and DHW modes) | | kW | 5.9 |
| | Gas flow rate at Pn (à 15°C - 1013 mbar) | Natural gas H (G20) | $m^3/h$ | 2.41 |
| | | Natural gas L (G25) | $m^3/h$ | 2.80 |
| | Gas flow rate at Pn | Butane (G30) | Kg/h | 1.79 |
| | Nominal efficiency 80/60 | | % | 96.8 |
| | Nominal efficiency 40/30 | | % | 108 |
| | Maximum temperature (Safety thermostat cut-off) | | °C | 110 |
| **Specifications of the heating circuit** | Nominal water flow ($\Delta$T = 20 K) | | l/h | 1000 |
| | Rated net head (à 1000 l/h) | | mCE | 1 |
| | Flow temperature | | °C | 30 - 90 |
| | Maximum pressure | | bar | 3 |
| | Minimum operating pressure | | bar | 0.3 |
| **Domestic hot water specifications** | Instruction set outlet temperature | | °C | 40 - 60 |
| | Specific flow at $\Delta$T = 30K (2) (3) | | l/min | 22.5 |
| | Flow per hour at $\Delta$T = 35K (1) (3) | | l/h | 580 |
| | Flow in 10 min at $\Delta$T = 30K (2) (3) | | l/10 mm | 225 |
| **Electrical specifications** | Electrical connection | | V / Hz / A | 230 / 50 / 6 |
| | Power consumption | | W | 30 - 200 |
| | Degree of protection | | | IPX2D |
| **Dimensions** | Height | | mm | 1520 |
| | Width | | mm | 600 |
| | Depth | | mm | 647 |
| | Shipping weight | | kg | 196 |

(1) Heat exchanger inlet temperature : 80 °C
Domestic hot water temperature : 45 °C

(2) DHW setting : 60 °C
Average domestic hot water temperature : 40 °C
Boiler setting : 80 °C

(3) Cold water temperature : 10 °C

# 8 Energy savings

## 8.1 Energy-saving advice

- Keep the room in which the boiler is installed well ventilated.
- Do not block ventilation outlets.
- Do not cover the radiators. Do not hang curtains in front of the radiators.
- Install reflective panels behind the radiators to prevent heat losses.
- Insulate the pipes in rooms that are not heated (cellars and lofts).
- Close the radiators in rooms not in use.
- Do not run hot (or cold) water pointlessly.
- Fit a water-saving shower head to save up to 40 % energy.
- Take showers rather than baths. A bath consumes twice as much water and energy.

## 8.2 Room thermostat and settings

The type of thermostat and its setting have a considerable influence on energy consumption.

**A few tips:**

- A modulable thermostat, possibly in combination with thermostatic valve radiators, saves energy and offers considerable comfort. This combination allows you to set the temperature on each flow. In the room in which the room thermostat is installed, do not fit thermostatic valve radiators.
- Completely closing and opening thermostatic valve radiators causes undesirable temperature fluctuations. Open and close thermostatic valves in small steps.
- Lower the room thermostat when you air the rooms.
- When setting an hourly programmable thermostat, bear days when you are absent and holidays in mind.

# Warranty

You have just purchased one of our appliances and we thank you for the trust you have placed in our products. Please note that your appliance will provide good service for a longer period of time if it is regularly checked and maintained. Your fitter and our customer support network are at your disposal at all times.

## ■ Warranty terms

Starting from the purchase date shown on the original fitter's invoice, your appliance has a contractual guarantee against any manufacturing defect.

The length of the guarantee is mentioned in the price catalogue.

The manufacturer is not liable for any improper use of the appliance or failure to maintain or install the unit correctly (the user shall take care to ensure that the system is installed by a qualified fitter). In particular, the manufacturer shall not be held responsible for any damage, loss or injury caused by installations which do not comply with the following:

- applicable local laws and regulations
- specific requirements relating to the installation, such as national and/or local regulations
- the manufacturer's instructions, in particular those relating to the regular maintenance of the unit
- the rules of the profession

The warranty is limited to the exchange or repair of such parts as have been recognised to be faulty by our technical department and does not cover labour, travel and carriage costs. The warranty shall not apply to the replacement or repair of parts damaged by normal wear and tear, negligence, repairs by unqualified parties, faulty or insufficient monitoring and maintenance, faulty power supply or the use of unsuitable fuel. Sub-assemblies such as motors, pumps, electric valves etc. are guaranteed only if they have never been dismantled.

## ■ France

The preceding dispositions are not exclusive of benefits for the purchaser of the legal guarantee as stated in Civil Code articles 1641 to 1648.

## ■ Poland

Warranty conditions are included in the warranty card.

## ■ Switzerland

The application of the warranty is subject to the terms and conditions of sale, delivery and warranty of the company marketing our products.

## ■ Belgium

The preceding dispositions about the contractual guarantee are not exclusive of profit if the need arises for the purchaser in Belgium of the applicable legal dispositions on hidden defects.

## ■ Italy

The duration of our warranty is shown on the certificate delivered with the appliance.

Our liability as manufacturer may not be invoked in respect of incorrect use of the appliance, incorrect or insufficient maintenance thereof, or incorrect installation of the appliance (you must therefore ensure that installation and maintenance operations are carried out respectively by a qualified professional and by an after sales service company).

The legislation laid down by European Directive 99/44/EEC, transposed by Legislative Decree No. 24 of 2 February 2002 published in O.J. No. 57 of 8 March 2002, continues to apply.

## ■ Russia

The foregoing provisions in no way affect the rights of the consumer, which are guaranteed by the legislation of the Russian Federation as regards hidden defects.

The terms and conditions of warranty and the terms and conditions of application of the warranty are indicated on the warranty form.

The warranty shall not apply as regards the replacement or repair of wearing parts under normal use. Such parts include thermocouples, injection nozzles, flame control and ignition systems, fuses and gaskets.

## ■ Turkey

Due to the laws and regulations the product life for this product is 10 years. During that time the producer and/or the distributor has to provide after sales services and spare parts.

## ■ Other countries

The above provisions do not restrict the benefit of the legal laws regarding hidden defects applicable in the buyer's country.

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